

CLAIMS

1. A method of driving a bistable cholesteric liquid crystal display comprising the steps of:

- 5
- providing a reset voltage to set the pixels in the display to the reflective P state;
 - switching selected pixels to provide the desired pattern to the FC state and;
 - holding said display for a suitable viewing period.

- 10
2. A method of driving a bistable cholesteric liquid crystal display as claimed in claim 1 wherein said method comprises providing electrical pulses to column and row electrodes to impart a voltage on the cholesteric liquid crystal material in each pixel to drive the switching between the P state and the FC state.

- 15
3. A method of driving a bistable cholesteric liquid crystal display as claimed in claim 2 wherein said reset voltage is in the range of 10 to 40 V.

- 20
4. A method of driving a bistable cholesteric liquid crystal display as claimed in claim 2 wherein said step of providing electrical pulses to electrodes to switch said selected pixels to the FC state to provide said display comprises driving one set of electrodes with an address pulse and the remaining set of electrodes with data pulses such that the selected pixels are subjected to a voltage being the sum of the address and data pulses which is greater than the threshold voltage to switch to the FC state and the

non-selected pixels received a voltage with a data pulse of inverse sign to be a voltage below the threshold for switching to the FC state.

5. A method of driving a bistable cholesteric liquid crystal display as claimed in claim 2 wherein said viewing phase comprises applying insufficient voltages to any pixels to cause a change from the P state to the FC state.

6. A bistable cholesteric liquid crystal display comprising:

- a bistable cholesteric liquid crystal display;
- a plurality of pixels within said display;
- driving means to apply voltage to each pixel; and
- control means controlling said driving means to supply an initial voltage to said pixels to set all pixels to the P state, subsequently supplying sufficient voltage to selected pixels to switch said pixels to the FC state to provide the desired pattern and maintaining said display for a period of time for viewing of the display.

7. A bistable cholesteric liquid crystal display as claimed in claim 6 wherein said display includes a matrix of overlapping electrodes with the pixels of the display being defined by overlapping regions of said matrix of electrodes.

8. A bistable cholesteric liquid crystal display as claimed in claim 7 wherein said matrix of overlapping electrodes comprises a first set of electrodes and a second set of electrodes with the pixels defined by the overlapping regions between said first and

second sets of electrodes and wherein the reset voltage from the driving means is provided to said electrodes to drive all said pixels to the P state.

5 9. A bistable cholesteric liquid crystal display as claimed in claim 8 wherein the voltage supplied to the pixels for the display comprises providing an address voltage to one set of electrodes and a data voltage to the remaining set of electrodes such that selected pixels receive a cumulative total of said voltages and non-selected pixels receive a data voltage of opposite sign to provide a lower total voltage to non-selected pixels.

10 10. A bistable cholesteric liquid crystal display as claimed in claim 9 wherein said address pulse voltage is approximately 24 ± 3 V.

15 11. A bistable cholesteric liquid crystal display as claimed in claim 9 wherein said data pulse voltage is approximately 6 ± 2 V.

12. A bistable cholesteric liquid crystal display as claimed in claim 6 wherein said electrodes comprise transparent conductive film.

~ 13. A bistable cholesteric liquid crystal display as claimed in claim ~~11~~¹² wherein said transparent conductive film comprises indium tin oxide.

20 14. A bistable cholesteric liquid crystal display as claimed in claim 6 wherein said liquid crystal cell has a gap of 4 to 20 μ m.

15. A bistable cholesteric liquid crystal display as claimed in claim 6 wherein the liquid crystal display is driven only on receipt of a signal by the control means.

5 16. A bistable cholesteric liquid crystal display as claimed in claim 6 wherein said display is incorporated in a pager or cellular telephone.

Add
B1